

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

I claim:

1. A customized prosthetic implant for insertion into a patient to at least partially repair or replace bone or tissue, said prosthetic implant at least partially formed from a moldable compound that has been at least partially formed in a mold of a molding machine, said at least one dimensional setting for said mold obtained from information gathered from a site in said patient wherein said  
5 prosthetic implant is to be inserted.

2. The customized prosthetic implant as defined in claim 1, wherein said gathered information is at least partially obtained from said patient by a scanning device, said scanning device including a device selected from the group consisting of an MRI, an X-ray machine, ultrasonic machine, and combinations thereof.

3. The customized prosthetic implant as defined in claim 2, wherein said scanning device includes an MRI.

4. The customized prosthetic implant as defined in claim 1, wherein said moldable compound includes a material selected from the group consisting of bone, cartilage, calcium-phosphate compounds, ceramics, metals, polymers, co-polymers, resins, thermoplastics, and mixtures thereof.

5. The customized prosthetic implant as defined in claim 4, wherein said calcium-phosphate compounds include compounds selected from the group consisting of tricalcium phosphate compounds, whitlockite compounds, hydro-xyapatite, dentin, tricalcium phosphate-gelatin mixtures, tricalcium phosphate-gelatin-glutaraldehyde mixtures, and mixtures thereof.

6. The customized prosthetic implant as defined in claim 1, wherein said moldable compound rapidly hardens when exposed to heat, radiation, catalysts, chemical reactants, electromagnetic waves, sound waves, and combinations thereof.

7. The customized prosthetic implant as defined in claim 1, wherein said prosthetic implant is formed from multiple molding compounds.

8. The customized prosthetic implant as defined in claim 1, wherein said prosthetic implant includes at least one biological additive that was mixed with at least one of said moldable compounds.

9. The customized prosthetic implant as defined in claim 1, wherein said molding machine includes at least one adjustable mold cavity that is at least partially adjusted based on said obtained from information gathered from said site in said patient.

10. The customized prosthetic implant as defined in claim 1, wherein said prosthetic implant includes readable information pertaining to said obtained from information gathered from said site in said patient.

11. The customized prosthetic implant as defined in claim 10, wherein said readable information is printed on said prosthetic implant.

12. The customized prosthetic implant as defined in claim 1, including at least one structural component that is at least partially coated with said moldable compound, said structural compound at least partially increasing the rigidity and strength of said prosthetic implant.

19. The customized prosthetic implant as defined in claim 14, wherein said structural component is a non-customized size structure.

20. The customized prosthetic implant as defined in claim 19, wherein said structural component is a cage for insertion in an intervertebral disk space.

21. The customized prosthetic implant as defined in claim 14, wherein said moldable compound includes at least one biological additive.

22. The customized prosthetic implant as defined in claim 14, wherein said prosthetic implant includes readable information pertaining to dimensional information of said prosthetic implant.

23. A method for producing a custom prosthetic implant for insertion into a patient comprising:

- a. obtaining information about the site of implant for the prosthetic implant;
- b. processing said obtained information to generate information on the size and shape

5 of the prosthetic implant;

- c. transferring at least a portion of the generated information to a molding machine to at least partially form said custom prosthetic implant from a moldable compound; and,
- d. inserting said custom prosthetic implant into said site for said prosthetic implant.

24. The method as defined in claim 23, wherein said step of obtaining information is at least partially by the use of at least one electronic scanner, said electronic scanner including a scanner selected from the group consisting of an MRI, ultrasonic device, X-ray machine, and combinations thereof.

25. The method as defined in claim 23, wherein said step of processing said obtained information includes the use of at least one data processor.

26. The method as defined in claim 25, wherein said at least one data processor generates data to form a multi-dimensional representation of said prosthetic implant.

27. The method as defined in claim 25, wherein said at least one data processor generates at least one graphical representation of said prosthetic implant.

28. The method as defined in claim 26, including the step of manually modifying said generated data.

29. The method as defined in claim 23, wherein said step of transferring at least a portion of the generated information to a molding machine includes a transmission device selected from the group consisting of wires, cables, electromagnetic waves, and combinations thereof.

30. The method as defined in claim 23, wherein said molding machine includes at least one mold cavity that can be varied in size and/or shape, said size and/or shape of said mold cavity altered based at least partially on said data transferred to said molding machine.

31. The method as defined in claim 30, including the steps of flowing said moldable compound into at least mold cavity and at least partially forming said prosthetic implant in said mold cavity and subsequently hardening at least a portion of said moldable compound

32. The method as defined in claim 31, wherein said moldable compound is at least partially hardened by exposure to heat, radiation, catalysts, chemical reactants, electromagnetic waves, sound waves, and combinations thereof.

33. The method as defined in claim 23, wherein said moldable compound includes a material selected from the group consisting of bone, cartilage, calcium-phosphate compounds, ceramics, metals, polymers, co-polymers, resins, thermoplastics, and mixtures thereof.

34. The method as defined in claim 31, including the step of flowing multiple types of said moldable compounds into said at least one mold cavity.

35. The method as defined in claim 30, including the step mixing of at least one biological additive with said moldable compound with at least one of said moldable compounds prior to fully molding said moldable compound in said mold cavity.

36. The method as defined in claim 23, including the step of at least partially coating a surface of said prosthetic implant with a substance selected from the group consisting a biological additive, cells, and combinations thereof.

37. The method as defined in claim 23, including the step of including readable information pertaining to said prosthetic implant on said prosthetic implant, said readable information including information selected from the group consisting of type of moldable material, size and shape information use to form the prosthetic implant, internal features of said prosthetic implant, type of additives included on and/or in said prosthetic implant, and combinations thereof.

38. The method as defined in claim 23, wherein said molding machine can form multiple types of prosthetic implants as well as multiple shaped and sized prosthetic implants for each of the types of said prosthetic implants.

39. The method as defined in claim 30, including the step of inserting at least one structural component in said molding cavity and at least partially coating said structural component with said moldable compound.

40. The method as defined in claim 39, including the step of selecting the shape and/or size of said structural component based at least partially on said obtained information.

41. The method as defined in claim 30, including the step of inserting at least one secondary component in said molding cavity and at least partially coating said structural component with said moldable compound.

42. The method as defined in claim 23, including the step of modifying at least a portion of said prosthetic implant after said prosthetic implant has been removed from said molding machine, said modify step including a step selected from the group consisting of labeling, cutting, smoothing, disinfecting, etching, and combinations thereof.